

ABSTRACT

A plurality of fuel electrodes are disposed on one surface of a solid polyelectrolyte membrane, while a plurality of oxidizer electrodes are disposed on the other surface of the same to create a plurality of unit cells which share the solid polyelectrolyte membrane. These unit cells are electrically connected through connection electrode extending through the solid polyelectrolyte membrane. A groove is formed in a region of the solid polyelectrolyte membrane between adjacent unit cells. This groove limits the migration of hydrogen ions to adjacent unit cells to prevent a reduction in voltage. The resulting solid polymer fuel cell, which is in a simple structure and reduced in size, can provide high power.